

January 9.-----

I acted as Sargent's first assistant on Friday and am to write up the description of the operations each time and the postoperative notes.

I brought my cat up from Oxford, the one with half a brain. I carried her in a closed hamper together with the brains of some of her sisters, but she didn't object in the slightest, and my fellow travellers never suspected. There is a whole epoch in neurological knowledge in that cat's symptoms, if only one could see clearly enough to interpret it. I shall do more work along that line someday.

Gordon Holmes looked at her yesterday and was very helpful as long as I could keep him pinned down. I never get Sherrington to commit himself on her. She dies soon and then the long microscopic hunt. She eats now, purrs, growls, walks, but cannot find her milk, etc.

January 22, 1921 -- London

The surgical cases are tremendously interesting. The best part of it is that I have the chance of studying them carefully and getting the opinion of the best neurologists and then, instead of wondering vaguely whether or not the diagnosis was correct, I have the opportunity of seeing their brain, then seeing them recover, or die, and conclude for myself whether or not the pre-operative conclusions were justified.

The English work in a peculiar way. We pride ourselves on having the last word in equipment at home, and then may not use it very well. The surgeon over here does not mind making use of make-shift instruments, and does not seem to worry much about the operation beforehand. The result is that he does the ordinary

Carbons

case very well and with consistently good results. But in an unusual crisis he fails because he is not equipped for it. Also his easy going carelessness with regard to asepsis must be responsible for occasional failure. Brain surgery at present saves so few patients. Most of the cases are beyond hope anyway and the only possible thing is to relieve them from headache and to save their eyesight for a little while, and the number of immediate deaths are so enormous in comparison with other branches of surgery that many physicians advise against turning their cases over to the surgeon even when they do realize that they have a brain tumor (which they rarely do before the postmortem).

An old interne from the National Hospital told me the other day that he had made a note of 150 cases operated on while he was on service and only two of them walked out of the hospital entirely cured of all symptoms.

I know the surgeon who was working there then and he knows nothing about the brain, and also the statistics are not fair, as many, most of the cases, could only be improved.

But it is such a little thing that turns the scale in brain operations, and I see things done even by Sargeant who is a splendid surgeon which I, personally, think are the cause of an occasional death. That sounds egotistical, no doubt. At any rate, in the next 30 years I believe there will be great strides in our knowledge of the nervous system and our treatment of it, and I want to take part on both changes. I am making up my mind to a lot of things when the opportunity comes.

April 4, 1928 ---

Today we went to Prof. Foerster's home for dinner. They live in a very nice apartment near the medical school, and not

far from the Zoo. He is a rather tall, stooped man who has kindly manners and a rare but beaming smile. His mother was there, quite proud of her deceased husband. He also was a professor, but of philology in Kiel. Frau Professor Doktor, for such is her title, is very charming. She has blond hair just turning gray. Her daughter is flaxen haired, and kissed Helen's hand when she made a curtsy. A Dr. Beck from Baltimore was there, a wandering American student.

They were cultured and pleasing. The professor's room was an astonishing picture -- journals and books piled all over the floor and chairs, but in perfect order and no dust anywhere. He knew just where to put his hand on anything in any part of the room. He was writing in a book on the experiences learned from the war by surgeons on both sides -- in neurology.

We came away a little early. The Frau Professor is not well just now.

June 4th, 1928 - Berlin----

Professor Foerster has been a great companion. He stayed with me in Berlin two days, and now has returned to his work in Breslau. He was very tired and bothered by rheumatism. I fear he slept little. We usually talked until late and any noise disturbed him. He travelled second class with me instead of first as it is his custom, I know, and the two nights in sleeper were not restful for him.

He loves coffee and we had it several times a day, lingering long over it. I am learning how to sit and talk or not talk.

He has the best mind with which I have come in contact, with the exception of Sherrington, and their mental type, simplicity, accuracy and logic, are very much alike. Neither has any pretense.

I get much more from Foerster, for he has done what I want to do and deals with the same problems. He doesn't operate as well as we do in many ways, but he is wiser in many ways.

Oct.14, 1937 Breslau.

I have just seen Professor Foerster. Of course he has aged. He walks with a cane and his face is drawn and yet vigorous. He was just out of bed from a cold and wore a scarf under his white coat. Yet the change was not in all that. The change was some inward thing that made him look out the window while he talked as though his thoughts too slipped out on some other errand.

As I neared the Wenzl Haucke Krankenhaus everything looked familiar along the street. The restaurants were much the same as when I visited them 9 years ago. At the entrance to the Hospital, a new surgical building had gone up in bright new brick. Once in the court all looked the same. A new news bulletin had been erected and on it some papers and a picture of Spain with arms and legs in bandages - soon finished. As I approached Abteilung #8 a great square brick building blocked the way, new red brick and square windows. On its front written something which meant devotion to patriae and scientiae, the patriae coming above just as photos of Hindenburg and Hitler were larger and above all the other photos back of Foerster's own desk.

I tried to enter the front door of this Neurologisches Forschungs Institute but it was locked and deserted. I went around to the back and entered the old Abteilung door. Inside I found a Schwester-small, and her face lined. She

asked whom she should announce and when I said Professor Penfield her face broke into a startling smile. Oh yes, she said, you used to work in that little room, pointing to a wall, now built up, where before there had been a low partition behind which I sat and stained sections while all the noises of patients and nurses came to my ears, an incessant hum until someone at about 11 o'clock called in a stage whisper "Der Professor". Then there would be a scurrying followed by silence.

The Professor came out eventually with a handful of youngsters in white coats. Stender, his assistant, very erect, sober and clicking his heels to me. One of them took me to the Forschungs Institute where many doors were unlocked (and locked again) and I finally ^{found} Gogli. He is a little man, enthusiastic, energetic and with organizing ability. He is doing neuropathology with great joy in it. The specimens, they have, now about 600 tumours, lie in vast rooms on shelves and are at last indexed and cross indexed. He and the Professor are writing a book on tumours of the nervous system.

He showed me the institute which does not admit any patients. Its actual upkeep is by the city while all the lab. budget for personelle and supplies comes, 10,100 marks, from City and the same from Province / Reich making 30,000.

Professor Altenburger in charge of physiology and Gogli Pathology. A chem. room with no occupant. Altenburger has been ill much of the time for two years. The whole place had a curious effect upon me. The great size of the rooms, the fact they were all locked and even the elevator and outside doors required special keys. I saw no technicians and only two assistants and they did not smile, did not greet even the Professor. The professors room showed a great change - Pictures, medals and honorary degrees on the wall in a symmetrical arrangement. In the next room a secretary and all the patients histories piled in cubbyholes. The secretary's typewriter was a very new note.

Oct. 17. We spent Friday evening with the Foersters leaving Jeff at the Hotel.

Foerster stoops and walks feebly on his legs as though they were stumps. His hair is still long and iron grey but thinner now. And yet when he struck a topic of interest or talked to Jeff about Peter Rabbit his face lighted up with the old intensity and looked as strong as ever. He seems mentally strong but I think he is overcome somewhat by fear of his own physical failing and at times he said all went blank before him and he didn't know what was going on.

Epilepsy - traumatic he feels has had good outcome in many of his operative cases. Herr Wolff has never had a recurrence of attacks but is hostile and will not be shown I think he said Lorenz with the birth injury was still cured also. He said some of the old war injuries of the brain showed evidence of advancing lesion, attacks coming on 20 years after injury and advancing weakness or degeneration. He has asked "them" to study the brain for fat cells and has found them. He agreed the treatment of ep. was surgically more hopeful than brain tumours. After all, he said, when we treat brain tumours we save 2 or 4 out of 100. When I protested against this discouraged outlook, he admitted it might be a little better.

He said he was pleased by the account of the spread of an epileptic discharge in my recent paper, the one on consciousness. He suddenly got to his feet and shut off the light on his desk. He then went to the main light switch and said "center in the medulla" and switched off the light, then "center near the third ventricle" and switched on the light. He referred to two aspects of the localization of consciousness but I could not follow it further. He had shortly before asked me if I thought consciousness lay in cortex or in subcortex in a slightly confused manner.

He showed me a photograph of a huge occipital lobe removal for oligodendroglioma and said the patient had still preserved central vision now years afterward. He suddenly objected that these surgeons like Tönnis and Olivecrona who had no interest in the physiological problems would not help out, were too busy to bother with visual fields, etc.

One subject after another we took up and plunged to conclusion finding a community of attitude and reasoning that was almost startling and which brought a sudden pause after each subject was brought up. When I talked to him about headache, he was interested and said he had noted that on tying the longitudinal sinus or stimulating it there might be a sudden short shock to patient as though there were an active reflex. I recounted my experience with Mrs. Means and he agreed that was it. He spoke highly of Evans and said that of all the foreigners he went ahead and cut and stained his own sections and did not expect someone else to do it. George Chorobsky he spoke of and said he told him they had one great thing in common and that was friendship for me.

He said there is one thing, Wilder (calling me that for the first time) that you should do - bring out a second edition of your cytology and bring it up to date. I enquired and found he referred to the anatomy of regions of the brain a thing I studiously avoided in the book.

No I said, I shall never do it and now cytoarchitectural areas are too confused. The time is not yet ripe for it and I doubt whether many of these areas represent functional units. He seemed to agree although he has based his Jackson lecture on it.

I told him I could not extend the motor area so widely beyond the pre and post central gyri. His only response to this was to ask if I had not obtained movements by stimulation when areas 4 and 6 were absent. My answer was that I had never been sure of the complete absence of those areas. I pointed out that I thought the turning mass movements were always evidence of an epileptic discharge. (It really seems to me it is discharge of basal ganglia which have to do with tonic postural movements and holding of position and not cortex at all.)

I told him I thought there must be a chemical substance capable of producing ep. discharge and further formed during discharge. He agreed and recounted the work done in his lab. by _____ to show that an extract from an epileptic animal produced fits in other animals. He said the controls were negative but then he said the man had also found a substance formed in the brain during sleep and supposed that he had gone too far with that. I told him I had pursued circulation in ep. further and that the cause did not seem to be there, only an accompaniment.

He said "But that is all we can do - to follow up lines like that". I showed him a photo of a brain before and after a fit that showed red veins and streaking of veins afterwards. He was pleased but said when I asked him that he had never seen it. When I mentioned carotid body and Hauwers work he knew nothing of it but talked about the autonomic effects of a fit - diencephalic autonomic epilepsy.

Remember he said not to make the mistake I have made. We need more rest and more holidays than other men. He pointed to his big handbuch (Bumpke-Foerster) and said it had killed him and it was out of date as soon as it was finished.

Nov.3

A day in Strassbourg at the Maison Rouge to see Professor Leriche. He has grown a little heavier, a little older. His deaf wife is the same and they seem to be close to each other.

Nov.5. Mid Atlantic

Leriche has the same gestures. He lays one forefinger caressingly along the side of his nose when he has some particularly apt phrase or thought in mind. He has removed both carotid sinus nerve plexuses and has produced only one very severe headache. No other bad results. He has made some curious observations but the fundamental physiology he is far from. He is still an opportunist. He is contemplative but he does not follow any very deep laid plan. He has public and private patients in the same public hospital. He has organized his work. He wrote the recent book on Pain between 5 and 7 in the A.M. and his wife prepared breakfast for him at 5. He has accepted the chair of medicine in the College de France and expects to secure a surgical hospital service (although Vincent says he cannot possibly get one). We had dinner with the Leriche's and Fontaine and his young wife, and left Strassbourg early the first morning on the flier for Paris.

De Martel, the same quaint sensitive individual almost effeminate, talks a great deal and with so much emotion. When he found me in the op. room he said ____ "Oh but I knew you must be here. They called me up from Oxford last night to find out your address". You will do this operation. You can have it how you like, horizontal position, pick out the instruments you like and all. I will learn from you. --- No? Then I will get an epileptic and you operate tomorrow --- No? Yes, I know, never operate away from home. I am the same way. Cairns wanted me to do a case in London. I said no but I watched Cairns and the patient - is dead. We all lose them".

He opened the skull very quickly, only a little less dexterously than Olivecrona using his many automatic tools and gadgets. He removed the tumour very well. Then he spoiled it all by leaving the wound open. Too many postop. hges. Asepsis dreadful. Dexterity excellent. At the end he said come tomorrow to see a very famous Russian surgeon operate for me on paralysis agitans. Very famous man - well known - whats his name - what? Bodenko? Yes, perhaps thats it.

Vincent at his private clinic and at his public service La Pitie where he has changed Babinski's neurological clinic into a neurosurgical clinic supported by City. He operated first in 1929. His wife helped him and he has a maid from his home on his team. She ties knots well and is good looking. He supports everyone. His work is thoughtful, careful fastidious. Asepsis quite good, slow. He seemed unfriendly but took me to lunch and smiled when he had eaten. A brain tumour surgeon and interested in meningitis and abscess.

"I want to be made Prof. of Neurosurgery. At present there is neurosurgery in France but if I am killed in an accident tomorrow there will be none".

Nov.7, 1937.

A quiet Sunday at sea except for a furious but shortlived storm. I rested from work except to finish **proof** on the cortical sensation article. It is a worthwhile paper and I am pleased. Holmes said "you are much nearer the truth than Foerster. I didn't want to take Foerster's Hughlings Jackson Lecture for Brain. It was bad. I was surprised. And you thought I was wrong to criticize him. Now you have corrected him. Some one else will come along and correct you and bring you down a little farther". I wonder. We have only set down our findings, have not tried to convert them into anatomy.

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